

**The G20 Agenda for More Resilient Global  
Financial System: Stocktaking and Remaining  
Challenges**

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## **I . Introduction**

It has been five years since what is generally considered to be the start of the recent financial crisis, August 2007. Also it has been four years since the collapse of Lehman Brothers on September 2008, the event which triggered the crisis to spill over across the global economy. Yet the global financial crisis is the on-going process in other part of the world, notably in the euro area and the aftermath of the crisis has afflicted the global economy.

At the same time, the recent unprecedented global financial crisis played a pivotal role in making the G20 the premier forum for discussions of global economic issues. Since the crisis has provided the impetus for a major overhaul of the financial regulatory system, one of key issues for the G20, of course, is to build a new regulatory framework for more resilient financial system. However, it must be emphasized that the objective of the financial regulatory reform pursued by the G20, is not to merely respond to the crisis, but to re-establish the overall financial system, to prevent recurrence of future crises.

In assessing the progress of the G20 agenda of financial regulatory reform, it is important to recall the financial regulatory framework that had been going on in the run-up to the recent financial crisis. Beginning in the 1970s, the separation of traditional lending and capital markets activities began to break down under the weight of macroeconomic turbulence, technological and business innovation, and competition<sup>1</sup>. The dominant trend was the progressive integration of these activities. This, in turn, accelerated the dramatic expansion of the shadow banking system, including the notable growth of securitization and derivatives. Furthermore, the rapid growth of the shadow banking system lowered the effectiveness of financial supervision centered on bank regulations.

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<sup>1</sup> Daniel K. Tarullo, "Regulatory reform since the financial crisis", Speech at the Council on Foreign Relations C. Peter McColough Series on International Economics, New York, 2 May 2012

During the period from the 1970s until the recent financial crisis, the basic approach to financial regulatory framework was a “hand-off” approach, based upon the following two presumptions. The first presumption was that competition would enhance the efficiency of financial systems by accelerating innovation in financial instruments and management. The second presumption was that new financial instruments being developed would ensure a safer financial system through the diversification of risk.

Contrary to these two presumptions, however, the financial system was exposed to greater structural vulnerabilities, as demonstrated by the global financial crisis. In particular, growing integration of traditional lending and capital markets activities has facilitated competition among financial institutions. Faced with fierce competition however, financial institutions pursued a strategy to increase their sizes in an attempt to take advantage of so-called “too-big-to-fail” subsidy in their funding, owing mainly to the implicit government guarantee and took excessive risks in pursuit of higher yield. Meanwhile, the financial innovation that had been expected to diversify risks actually made financial system more complex and opaque. Lack of transparency and limited disclosure of the types and locations of risk made it difficult to assess the extent of exposures and potential spillovers, so that it became extremely difficult to detect the build-up of risks. Also, the financial system became over-leveraged and heavily interconnected. The heavy reliance on leverage in asset management also exacerbated procyclicality, damaging the overall stability of the financial system.

In this context, it should be mentioned that the financial crisis has shown the weakness of the traditional financial stability framework. This framework included three components: supervision of individual financial institutions; oversight of payment and settlement systems and other key market infrastructures; and monitoring of the functioning of financial markets

In this setting, since systemic risk was seen as a remote possibility, policymakers could rely on the resilience of the financial system<sup>2</sup>. In

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<sup>2</sup> Herve Hannoun, “Towards a Global Financial Stability Framework”, A speech at the 45<sup>th</sup> SEACEN Governors’

particular, there was no serious awareness that the global financial crisis could happen. Since neither the statutory framework for, nor supervisory oversight of the financial system adapted to take account of the new risks posed by the broader trend, the financial industry, to a large extent, had been a disaster waiting to happen.

The structural vulnerabilities that surfaced during the recent crisis were not confined to the management of individual financial institutions, but spread to include the financial system as a whole. In this regard, the G20 reform on financial regulatory reform must therefore be very comprehensive.

Realizing these serious drawbacks of the traditional financial stability framework, many policymakers have suggested the essential elements of a new global financial stability framework<sup>3</sup>. Although these elements might be slightly different from a person to a person, there is some consensus among policymakers, particularly among the G20 members, on the essential elements to be included in a new global financial stability framework.

The first element is that a new framework is needed to make sure a level playing field in regulation. This means that global coordination is required in designing a new regulatory framework in order to minimize the scope for cross-sector and cross-border regulatory arbitrage. In this context, it is utmost important that a new framework should be able to address emerging exposures and risks in the entire financial system, not just the banks. Otherwise, there is a danger that riskier activities and products will migrate to less regulated segments of the system, as occurred with shadow banking system, notably off balance-sheet investment vehicles during the recent financial crisis.<sup>4</sup>

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Conference 26-27 February 2010

<sup>3</sup> For example, see Vinals, Jose, Jonathan Fiechter, Celya Pazarbasioglu, Laura Kodres, Aditya Narain, and Marina Moretti, "Shaping the New Financial System", IMF Staff Position Note,(SPN/1015) October 3, 2010, International Monetary Fund and Herve Hannoun, "Towards a Global Financial Stability Framework", A speech at the 45<sup>th</sup> SEACEN Governors' Conference 26-27 February 2010

<sup>4</sup> Vinals, Jose, Jonathan Fiechter, Celya Pazarbasioglu, Laura Kodres, Aditya Narain, and Marina Moretti, "Shaping the New Financial System", IMF Staff Position Note,(SPN/1015) October 3, 2010, International Monetary Fund

The second element is that the focus needs to be system-wide, taking into account the mutually reinforcing interactions between the financial system and the macro-economy. This reflects the recognition that micro-prudential regulations which aim to improve the resilience of individual institutions are a necessary condition, but not a sufficient condition for a financial stability. Therefore, we need to incorporate the traditional framework with effective macro-prudential regulations that strengthen the resilience of the financial system as a whole. This includes a reduction of a pro-cyclicality of a financial system by adopting a holistic approach to mobilize prudential, monetary and fiscal policies in complementary ways.

The third element is a need to make resolution as a viable option to handle failed financial institutions at both a national level and for cross-border financial institutions. At the national level, it is essential to have effective policies and procedures for resolving failed financial institutions in a prompt and orderly manner. At the same time, given the increasing cross-border activities of financial institutions, it is also important to have an enhanced cross-border framework for resolution to minimize moral hazard while preserving financial stability.

The final element is that a new system should be able to improve the effectiveness of supervision. Strengthened supervision is a necessary condition to prevent excessive risk taking. Consequently, supervision needs to be more intensive and intrusive. In particular, given global integration of financial markets, more effort should be devoted to supervising cross-border exposures.

Against this backdrop, this paper updates a stocktaking of the G20 agenda toward more resilient financial system including: Basel III; regulations on systemically important financial institutions and shadow banking system; improvement of financial market infrastructures; and other issues. This paper then focuses on some of the remaining challenges of the G20 agenda.

## **II . Stocktaking of Financial Regulatory Reform Agenda**

### **1. Basel III**

The recent global financial crisis clearly revealed several serious shortcomings of the Basel II . On the one hand, Basel II capital standards did not work as intended to absorb losses. Consequently, a number of distressed banks had to be rescued by capital injection from taxpayers' money. Moreover, this inadequate level of capital was of insufficient quality. For instance, Tier 2 capital instruments, mainly subordinated debt, and in some cases non-common equity Tier 1 capital, did not absorb losses incurred by stressed banks during the crisis. On the other, the Basel II failed to ensure adequate liquidity buffers to protect the banking system from unforeseen risks.

On 16 December 2010, the Basel Committee on Banking Supervision (BCBS) released the Basel III rules, which is the core of the financial regulatory reform initiated by the G20 in an attempt to correct the deficiencies of Basel II revealed by the crisis, with the endorsement of the G20 Seoul Summit in November. Although Basel III may be regarded as an extended version of Basel II , it is different from Basel II in the following ways. For one thing, Basel III encompasses a broad array of risks since it not only tightens capital requirements, but also introduces liquidity standards and leverage ratio requirements. For another, Basel III explicitly addresses macro-prudential aspects of banking system stability.

Basel III combines a micro-prudential dimension designed to limit distress of individual banks and a macro-prudential dimension designed to limit system-wide financial distress together. Consequently, the enhanced Basel II framework and the macro-prudential overlay are together being referred to as Basel III<sup>5</sup>. Micro-prudential framework is provided by an enhanced Basel II framework, which aims to increase the resilience of individual

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<sup>5</sup> Herve Hannoun, "Towards a Global Financial Stability Framework", A speech at the 45<sup>th</sup> SEACEN Governors' Conference 26-27 February 2010

financial institutions. An enhanced Basel II includes: raising the quantity and the quality of Tier 1 capital; ensuring the adequate capital charges on banks' trading book; strengthening the risk management and disclosure practices of banks; introducing a leverage ratio to complement risk-weighted measures; and addressing counterparty credit risk posed by over-the-counter (OTC) derivatives.

The macro-prudential overlay has two dimensions: the time dimension and the cross-sectional dimension. The time dimension seeks to ensure the financial stability over time. In particular, the time dimension of the macro-prudential overlay addresses pro-cyclicality between the financial system and the real economy. Policy instruments for this purpose include counter-cyclical capital charges, forward looking provisioning for loan losses, and capital conservation rules for banks. The cross-sectional dimension of the macro-prudential overlay addresses the financial stability at each point in time. Tools for this purpose include a systemic capital surcharge for systemically important financial institutions (SIFIs), systemic oversight on the inter-linkage between common exposures of all financial institutions such as the OTC derivatives markets, building more resilient financial market infrastructures, and replacing the web of bilateral exposures with robust central counterparties (CCPs).

### **1-1. Strengthening Capital Requirements**

Basel III substantially raises the quality as well as the quantity of regulatory capital with a greater emphasis on common equity. While robust bank capital requirements alone cannot guarantee the safety and soundness of our financial system, they are essential ingredients for effective financial regulation, precisely because they are available to absorb all kinds of potential losses.

To improve the quality of capital, the BCBS has tightened the definition of common equity and limits what qualifies as Tier 1 capital. In order to ensure that the predominant form of Tier 1 capital is tangible common equity which

has higher loss-absorbing capacity, intangible assets such as good will and other deductions are excluded from the core Tier 1 capital, as regulatory capital will consist of common equity and retained earnings for higher loss absorbing capacity in times of distress.

In this context, it is worthwhile to recall that the original rationale for Basel's two tiers of capital requirements<sup>6</sup> was that Tier 1 capital would be available to absorb losses so as to allow the firm to continue as a going concern, while the additional Tier 2 capital would be available to absorb losses if the firm nonetheless failed. The various Basel frameworks have tried to strengthen both the quantity and quality of required Tier 1 capital.

Also the Basel Committee has strengthened capital regulations so that capital adequacy ratios are applied not only to total assets but also to individual items. Specifically, the ratios of total capital (Tier 1 + Tier 2), Tier 1 capital, and the common equity components of Tier 1 capital to risk weighted assets should exceed 8.0%, 6.0%, and 4.5%, respectively.

One important issue in the context of strengthening quality of capital is to build "bail-in" system which can facilitate the expansion of capital in times of crisis. The concept of so-called "bail-in" as opposed to "bail-out" was originally proposed by two economists of Credit Suisse in their article in the Economist in January 2010<sup>7</sup>. The idea of "bail-in" is that a bank's creditors agree in advance to have restructuring the liabilities of a distressed financial institution by writing down its unsecured debt and/or converting it to equity if the bank is in trouble. More specifically, they proposed a new process for recapitalizing failing banks by using contingent convertibles, the so called COCOs<sup>8</sup>. These debt-like instruments convert to common equity when a

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<sup>6</sup> The Basel Committee distinguishes between going-concern capital (Tier 1) and gone-concern capital (Tier 2). Going-concern capital is available to absorb losses while a financial institution remains solvent. Gone-concern capital absorbs losses following insolvency and during liquidation of these assets.

<sup>7</sup> Calello, Paul and Wilson Erwin, "From Bail-out to Bali-in", The Economist, January 28, 2010

<sup>8</sup> The term "bail-in capital" and "COCOs" are often used interchangeably. But it is useful to make a distinction. According to PWC, bail-in capital is defined as instruments where write downs are triggered by the regulator at the point of non-viability whereas COCO instruments are those that converts to equity when pre-defined trigger point is passed as going concern. See PWC, "The trillion dollar question: can bail-in capital bail out the banking industry?", Basel III and beyond, November 2011

bank's regulatory capital is reached or falls below a predetermined threshold, providing a buffer during a period of stress. The extra capital they provide directly might be sufficient for moderately-sized stress events. Also, they argued that a well-designed contingent capital instrument can create good management incentives – for example, encouraging more capital to be raised early in a crisis, and focusing boards and managers on risk management.

The policymakers have given more attention to their proposal since the statutory bail-in power could achieve a prompt recapitalization and restructuring of the distressed financial institutions without taxpayers' money. In fact, the idea was implemented in Switzerland. More specifically, Credit Suisse and UBS will have to hold total capital equivalent to 19 per cent of the risk-weighted assets (RWAs) on their balance sheets. Some 10 per cent of the RWAs must be held in the form of common equity, but 9 per cent get to come in the form of COCOs. For the implementation of the Swiss requirements, the same timeframe will apply as in the case of Basel III.

The BCBS had reviewed the use of contingent capital instruments such as COCOs as vehicles for providing additional loss absorbency as “early-trigger” contingent capital<sup>9</sup> could help absorb losses on a going-concern basis. After an in-depth review, on 13 January 2011, the Basel Committee announced that all non-core equity capital instruments of internationally active banks would have to have bail-in features. The terms and condition of all non-common Tier 1 and Tier 2 instruments issued by an internationally active bank must have a provision that requires such instruments, at the option of the relevant authority, to either be written off or converted into common equity upon the occurrence of the trigger event. More specifically, all non-common equity Tier 1 capital, and all Tier 2 capital should convert to common equity as soon as authorities make a capital injection to save the firm. This should encourage the holders of these instruments to assess the risk of failure and price them accordingly,

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<sup>9</sup> So-called “early trigger” or “higher-trigger” COCOs convert to common equity well before a bank has become non-viable., whereas “Late-trigger” COCOs, which convert when a firm is no longer viable, are better understood in the context of strengthening resolution.

providing an additional source of market discipline and reducing moral hazard. According to the IMF study<sup>10</sup>, “bail-in” as a going-concern form of resolution could mitigate the systemic risks associated with disorderly liquidations, reduce deleveraging pressures, and preserve asset values that might otherwise be lost in liquidation.

Nevertheless, there are some concerns and issues to be resolved in practice. Obviously, one big concern is that any effort to adopt bail-in could require significant changes to the rights of creditors. Another concern is: if the use of a bail-in power is perceived by the market as a sign of the concerned institution’s insolvency, it could trigger a run by short-term creditors and aggravate the institution’s liquidity problem. In addition, one critical issue to be resolved is how to make the trigger for bail-in power consistent with those used for other resolution tools. Other essential issues include building a clear and coherent legal framework for bail-in, establishing balance the rights of private stakeholders and the public policy interest in preserving financial stability.

## **1-2. Introducing a leverage ratio**

Under Basel II, banks can choose to calculate the size of their risk-weighted assets using either the standardized approach based on external credit or the internal rating-based approach. In most cases, these calculations refer only to assets that are held on balance sheet, without considering off-balance sheet assets.

Given the difficulties for supervisors and regulators in monitoring bank’s assets and their complexity, the Basel Committee has introduced a simple leverage ratio to complement risk-weighted measures. The new leverage ratio includes not only exposures from on-balance sheet but also off-balance sheet positions, in order to correct the risk measurement errors of the Basel II framework and reflect off-balance sheet transactions accurately. Under

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<sup>10</sup> Zhou, Jiangping, Virginia Rutledge, Wouter Bassu, Marc Dobler, Nadege Jassaud, and Michael Moore, “from Bail-out to Bail-in: Mandatory Debt Restructuring of Systemic Financial Institutions”, IMF Staff Discussion Note (SDN/12/03), International Monetary Fund, April 24, 2012

this new regulation, banks should maintain at least 3% of the leverage ratio, which is defined as the ratio of Tier 1 capital to nominal value of assets including off-balance sheet assets. In the meantime, the BCBS will that the leverage ratio will be applied in a globally consistent manner, a Pillar 1 treatment, after adjusting the difference in accounting standards.

### **1-3. Introducing liquidity standards to internationally active banks**

Before the recent financial crisis, many banks had operated with strikingly thin liquidity margin, relying heavily on wholesale funding. They did not imagine that entire markets could freeze up. Also they did not anticipate an extended period of illiquidity. At the height of the crisis, counterparties lost confidence in the liquidity of many banks, severely straining their access to wholesale funding. As we have seen from the case of Northern Rock in September 2007, a financial firm with significant amounts of short-term funding can become illiquid before it becomes insolvent, as creditors run in the face of uncertainty about the firm's solvency. Higher levels and quality of capital can mitigate some of this risk, but not much. Therefore, it was widely agreed among regulators that quantitative liquidity requirements should be developed.

In order to address immediate liquidity problem, the BCBS released "Principles for Sound Liquidity Risk Management and Supervision" in 2008. Later, in an attempt to complement "the 2008 Principles, the BCBS introduced two standards of liquidity: one is the Liquidity Coverage Ratio (LCR) with a 30-day timeframe; the other is the Net Stable Funding Ratio (NSFR) with one year timeframe. The LCR<sup>11</sup> is designed to bolster the short-term resiliency of an institution's risk profile, by ensuring that it has sufficient high quality liquid resources to survive an acute stress scenario lasting for one month. The NSFR<sup>12</sup> requires a minimum amount of stable sources of funding at a bank relative to the liquidity profiles of the assets, as well as the potential for contingent liquidity horizon, needs arising from off-

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<sup>11</sup> Highly liquid assets / net cash outflows over 30-day time period  $\geq$  100%

<sup>12</sup> Available stable funding / required stable funding  $\geq$  100%

balance sheet commitments, over a one-year horizon. The NSFR aims to limit over-reliance on short-term wholesale funding during times of buoyant market liquidity and encourage better assessment of liquidity risk across all on- and off-balance sheet items.

#### **1-4. Mitigating pro-cyclicality**

Pro-cyclicality describes the self-reinforcing mechanism within the financial and between the financial system and the real economy that can exacerbate boom and bust cycles, undermining financial and macroeconomic stability<sup>13</sup>. To help mitigate pro-cyclicality in the financial system, Basel III provides a mechanism in the regulatory capital to build up and run down capital buffer in countercyclical fashion over the business cycle. In particular, the BCBS came to a conclusion that it would not be possible to achieve greater sensitivity across institutions at a given point of time without introducing a certain degree of cyclicality in minimum capital requirement<sup>14</sup>. These safety capital buffers must build up in good times in preparation for future difficulties. Such a build-up can possibly be served as a measure to contain excessive risk-taking during the up phase of the business cycle. However, in bad times, these buffers can be run down, allowing the system to absorb emerging strains more easily.

More specifically, the BCBS has established the following measures in addressing pro-cyclicality. First, the default rate using the “Through-the-Cycle” (TTC) rating system will be used instead of that of the “Point-in-Time” (PIT) rating system, to flatten the capital formula.

Second, the Basel III introduces a capital conservation buffer, a buffer that is fixed regardless of the economic cycle, which will be used to absorb losses during periods of financial stress. As a bank’s capital level moves closer to the minimum requirement, the capital conservation buffer imposes a

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<sup>13</sup> Herve Hannoun, “Towards a Global Financial Stability Framework”, A speech at the 45<sup>th</sup> SEACEN Governors’ Conference 26-27 February 2010

<sup>14</sup> Basel Committee on Bank Supervision, “Basel III: A global regulatory framework for more resilient banks and banking system”, Bank for International Settlement, December 2010

progressively tightened constraint on the bank’s discretionary distributions, such as dividends. Retaining bigger proportion of earnings during a downturn will help ensure that capital available to support banks’ ongoing business operations during the financial distress.

Finally, a counter-cyclical capital buffer, a variable buffer applied in accordance with macro-economic conditions, is introduced. In other words, supervisors will be able to impose a countercyclical buffer on their banking system when credit growth seems to be getting out of hand, with a reference to the ratio of aggregate credit to GDP. This buffer has the effect of restraining excessive credit expansions during economic booms and preventing sudden credit contractions during economic busts. A countercyclical buffer will be at national regulatory authorities’ discretions. The authorities will impose this buffer only when they judge that credit growth is resulting in unacceptable build-up of systemic risk.

When the whole Basel III package is implemented, banks’ common equity will need to be at least 7% of risk weighted assets. This compares to a Basel II level of 2% common equity—that is before taking account of the changes to definitions and risk weights, which make the effective increase in capital all the greater. The 7% figure includes a 2.5% capital conservation buffer.

### Capital Requirements and Buffers

	(%)		
	Common equity	Tier 1 capital	Total capital
Minimum (A)	4.5	6.0	8.0
Conservation Buffer (B)	2.5		
A+B	7.0	8.5	10.5
Countercyclical Buffer	0.0~2.5		

## **1-5. Improving the risk coverage of the regulatory capital framework**

The BCBS has improved the risk coverage of the regulatory capital framework for capital market activity. Specifically, capital requirements are raised for stocks, bonds and other trading book items, as well as for asset-backed securities, and differentiated risk assessments should be conducted on not only different products, but different counterparty risks. Also, trading activities should be subject to a stressed value-at-risk (VaR) requirement. In addition, Basel III creates incentives for banks to use CCPs in their derivatives trading.

These additional capital charges have been already implemented effective from the end of 2010. This reflected the BCBS's judgment that any postponement would not be justified, given the risks posed by the vulnerability on banks' balance sheets.

## **1-6. Impact of the new requirements and implementation**

It is true that the Basel III will reduce the risk of a costly financial crisis and stabilizes the financial environment for long-term business decisions. Nevertheless, it is also true that the process of implementing the new regulatory framework will impose some costs on banking institutions and their customers as the institutions adjust their balance sheets and business models.

Against this background, the BCBS conducted a comprehensive quantitative impact study (QIS), in an attempt to assess the impact of the new requirements and corresponding adjustment. In particular, the Financial Stability Board and the Basel Committee assembled the Macroeconomic Assessment Group (MAG) to examine potential transitional impacts of Basel III on lending and investment<sup>15</sup>. The MAG concluded that the transitional effects were likely to be modest. Specifically, the MAG estimated that

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<sup>15</sup> Bank for International Settlement, BIS 81<sup>st</sup> Annual Report, Bank for International Settlement, Basel, Switzerland, June 2011

bringing the global common equity capital ratio to a level that would meet agreed targets over 8 years would result in a maximum decline in average annual growth of GDP 0.03 percentage points relative to baseline forecast during 35 quarters, after which the growth rate would return back to towards the baseline. Also, the group found that implementing the reforms over 4 years rather than 8 years would lead to a slightly greater decline in the average annual growth rate of GDP over a short period, followed by a return towards baseline.

In addition, a subgroup of the Basel Committee, the long-term economic impact group (LEI group), conducted studies on the long-term economic impact of the reform, comparing costs with benefits. Based on these studies, the LEI group concluded that the long-term benefits of stronger capital and liquidity requirements substantially exceed the costs of the reform.

Based on these studies, the BCBS made it clear that the new standards would be introduced in a manner that does not impede the economic recovery. Consequently, the Committee chose a staggered timeline for implementation. Specifically, the Basel III requirements are due to take effect from the beginning of 2013 and will be phased in by 2019. This time frame includes an observation period to review the implication of the liquidity standards for individual banks, the banking sector and financial markets in order to address any unintended consequences. In addition, the BCBS will assess the impact of the leverage ratio during the transition period with a view to making sure that it achieves its intended objectives.

## **2. Addressing moral hazard posed by SIFIs**

Although the strengthening of capital and liquidity that will take place under Basel III is an important and necessary part of the regulatory agenda, it is not sufficient to address the negative externalities posed by SIFIs. The recent financial crisis demonstrated that some financial institutions had grown so large, leveraged, and interconnected that their failure could pose a threat to overall financial stability. In particular, creditors who believe that an institution will be regarded by the government as too big to fail may not

price into their extension of credit the full risk assumed by the institution. The lack of market discipline allowed them to borrow at preferential rates, operate with higher levels of leverage, and engage in riskier activities. At the same time, the management and shareholder of these institutions may regard themselves as holding a kind of put option and may be motivated to take greater risks with the cheaper funds available to them. If the risky projects pay off, the shareholders profit. If the results are bad, the government may keep the institution afloat, thereby preserving at least some value for shareholders.

The sudden collapses of SIFIs turned out to be among the most destabilizing events of the crisis, as evidenced by the collapse of the Lehman Brothers in September 2008. In addition, with lenders increasingly reluctant to extend credit in the wake of lost confidence on the financial system, liquidity-strained institutions made increasingly distressed asset sales, which placed additional downward pressure on asset prices, leading to margin calls for all collateral providers. Consequently, as the result of the perceived severe impact on the financial system and the economy associated with their disorderly failure, many governments had no other option but to rescue these institutions from failure with taxpayers' money, including capital injection, deposit guarantees, etc. During this rescue process, however, losses were limited to their shareholders, while most of their creditors were protected. These bail-outs were based on policy judgments that failures of SIFIs would pose a risk that the entire financial system could be collapsed. However, these actions taken by governments helped to solidify the market view that such financial institutions were too systemically important to fail, raising concerns about moral hazard risk. In other words, once a government rescues these institutions, moral hazard problems are compounded, as market participants may expect similarly situated institutions to be rescued in the future.

Realizing seriousness of potential negative externalities posed by SIFIs, the G20 Leaders requested the Financial Stability Board (FSB) and the BCBS to develop a regulatory framework to address the SIFI problem. Despite the

rationale for developing a regulatory framework for SIFIs with the strong endorsement of the G20 Leaders, there were some concerns among policymakers on the effectiveness of the regulations tackling moral hazard risk posed by SIFIs.

The first official discussions on the SIFI regulation among the G20 officials were taken place at the G20 workshop hosted by Korea in November 2009<sup>16</sup>. At the workshop, there were skeptics and advocates on the effectiveness of regulating SIFIs. Skeptics argued that regulating SIFIs would be ineffective based on the following two reasons. First, they argued that the designation of certain financial institutions as SIFIs by regulatory authorities itself could provide implicit government guarantees that they could be bailed out when they failed, thereby creating the scope for their moral hazards. This, in turn, might make almost impossible to prevent the so-called “too-big-to-fail subsidy” in funding costs of SIFIs. In fact, an empirical study by the staff of the Federal Reserve Bank of New York<sup>17</sup> found that the naming of eleven banks as “too big to fail” in 1984 led bond raters to raise their ratings on new bond issues of these banks about a notch relative to those of other unnamed banks. Furthermore, the study suggested that investors were even more optimistic than raters about the probability of support for those banks. Second, skeptics argued that although any effective approach to address the SIFI problem needed to have effective resolution at its base, it might be almost impossible to resolve SIFIs in an orderly manner, due mainly to a multinational aspect of most SIFIs’ business activities. This argument reflected the inconvenient truth that financial institutions may be global in life but are national in death.

But the advocates suggested the following reasons to support the case for regulating SIFIs. First, they thought that naming SIFIs would make little difference since market participants already knew the list of potential SIFIs.

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<sup>16</sup> “Securing Sustainable Recovery”, the G20 workshop hosted by the Korean government, held in Seoul, Korea on 15~16 November 2009.

<sup>17</sup> Morgan, Donald P. and Kevin J. Stiroh, “Too Big to Fail after All These Years,” Staff Report, Federal Reserve Bank of New York, September 2005

Second, they argued that a sufficiently large surcharge would reduce the probability of a bail-out by strengthening the financial institutions, mitigating negative externalities posed by SIFIs. Third, they believed that it would be possible to encourage SIFIs to become simpler and smaller, if the special charge for SIFIs were set high enough to offset the subsidized borrowing costs that come with SIFIs' implicit government guarantees. Fourth, although there were some truths about the complexity of resolving internationally active financial institutions in an orderly manner, they argued, it could be possible to resolve internationally active SIFIs without causing significant disruption to wider financial system by introducing comprehensive resolution regimes and tools, and improving cross-border coordination mechanisms.

Despite the practical difficulties associated with developing an effective regulatory framework to reduce the moral hazard risk posed by SIFIs, the G20 was determined to make sure that no financial institution is “too-big-to-fail” or “too-important-to-fail” and taxpayers do not bear the costs of resolution of any financial institution that does fail. To this end, the regulatory framework for SIFIs being developed by the FSB comprises four main components: identification of SIFIs, greater loss absorbency capacity, making resolution as a viable option, more intense supervision, and strengthening core financial market infrastructures.

More specifically, the FSB report on SIFIs<sup>18</sup>, which was endorsed by the G20 Leader at the Seoul Summit, specified the policy framework for SIFIs should include the following elements. The first one is a resolution framework and other measures to ensure that all financial institutions can be resolved safely, quickly and without causing a major disruption in the financial system and exposing the taxpayers to the risk of loss. The second one is a requirement that SIFIs have higher loss absorbency capacity to reflect the greater risks that these institutions pose to the global financial system. The third one is more intensive and intrusive supervisory oversight

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<sup>18</sup> Financial Stability Board, “Reducing the moral hazard posed by systemically important financial institutions”, October 2010

for SIFIs. The fourth one is robust core financial market infrastructures to reduce contagion risk from the failure of individual institutions, the final one is other supplementary prudential and other requirements as determined by the national authorities.

## **2-1. Identifying SIFIs**

SIFIs are firms whose disorderly failure, because of their size, interconnectedness, substitutability, concentration and common exposure, would cause significant disruption to the entire financial system and the economic activity. Size refers the volume of financial services provided by the individual institution of the financial system. Interconnectedness describes a situation where distress at one institution raises the likelihood of distress at others. Substitutability means the extent to which other institutions of the system can provide the same services in the event of a failure of a certain institution. Concentration describes a situation that some financial systems or market segments feature a few large players that dominate a market for financial services where there are few alternatives. Common exposure refers that financial institutions may hold similar positions to their peers, suggesting that a common shock could cause distress at multiple institutions simultaneously.

In order to mitigate moral hazard risk and negative externalities associated with SIFIs, a logical starting point is to identify SIFIs. SIFIs are divided into two groups. One is global SIFIs (G-SIFIs) which are systemically important not only in its home country but also in the world. The other is domestic SIFIs (D-SIFI) that are only systemically important in its home country's perspective. In the proposed SIFI framework, G-SIFIs are to be designated by FSB and D-SIFIs are to be designated by each country's own regulatory authorities.

The Macro-prudential Supervision Group (MPG) under the BCBS developed an assessment methodology comprising both quantitative and qualitative indicators to assess the systemic importance of global

systemically important banks (G-SIBs). The assessment methodology is an indicator-based designed to assess the likely impact of the failure of a bank on the global financial system and wider economy. Specifically, in this methodology, potential SIBs are rated against indicators reflecting size, interconnectedness, availability of substitutes, cross-jurisdiction activity, and complexity.

Based on this methodology, the FSB released a list of 29 G-SIBs on 4 November 2011. The initial list included 17 banks from Europe, 8 banks from the US, and 4 banks from Asia. The list will be updated by the FSB each year in November. Also, the G20 asked International Association of Insurance Supervisors (IAIS), Committee on Payment and Settlement System (CPSS), International Organization of Securities Commissions (IOSCO) and the FSB in consultation with IOSCO to prepare methodologies for assessing G-SIFI status for non-bank financial institutions by end-2012. In this regard, the IAIS completed its assessment methodology for identifying globally systemically important insurers in June 2012.

## **2-2. Greater loss absorbency capacity**

Based on the policy framework for SIFIs suggested by the FSB in 2010 that G-SIBs should have higher loss-absorbing capacity to reflect the greater risks posed by them, G-SIBs face additional capital requirements to increase their going concern loss absorbency. The rationale for adopting additional measures, including higher loss absorption capacity for G-SIBs, is based on the negative cross-border externalities they create. The additional capital must be met with common equity Tier 1 capital. The BCBS decided that the additional capital would range from 1% to 2.5% of risk-weighted assets, depending on a G-SIB's systemic importance. Specifically, G-SIBs will be allocated to four "buckets" requiring levels of additional capital from 1.0% to 2.5%. "Bucket 5", requiring 3.5% additional capital, will initially be empty to provide an incentive for G-SIBs not to become bigger or more complex. Also, the published list of G-SIB will show the allocations to buckets for each institution from November 2012.

The additional capital will be treated as an extension of the capital conservation buffer put in place in Basel III. Thus, if a G-SIB breaches the additional capital requirement, it will face restrictions on distributions and will have to agree a capital remediation plan with its supervisor.

The requirement will be phased in parallel with the Basel III capital conservation buffer and countercyclical buffers. Specifically, the requirement will commence on 1 January 2016 and be fully in place from 1 January 2019.

### **2-3. Making resolution a viable option**

Since the most obvious solution for moral hazard posed by SIFIs is to make sure that no institution is deemed to be either too big or interconnected to fail, another critical element of the G20's effort to address SIFIs is to develop effective tools and a framework for resolution of large complex cross-border financial institutions. The recent crisis clearly demonstrated that the scope, scale and complexity of international financial transactions expanded remarkably, while the tools and techniques for handling resolution of cross-border financial institutions did not evolve. In fact, many complex economic and legal issues are involved in the bankruptcy of a large complex cross-border financial institution. Moreover, if a jurisdiction establishes legal frameworks that strengthen the protection of its people's rights in resolving cross-border financial institutions, this may bring about much international conflict and cause severe financial market disruptions.

To handle this problem, the FSB released a new internationally-agreed standard that sets out the responsibilities, instruments and powers that national resolution regimes should have to resolve a failing SIFI, "Key Attributes of Effective Resolution Regimes for Financial Institutions"<sup>19</sup>, on 4 November 2011. The key Attributes will help address the "too-big-to-fail" problem by making it possible to resolve any financial institution in an

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<sup>19</sup> Financial Stability Board, "Key Attributes of Effective Resolution Regimes for Financial Institutions", October 2011

orderly manner and without exposing the taxpayer to the risk of loss, protecting vital economic functions through mechanisms for losses to be shared between shareholders and unsecured and uninsured creditors.

More specifically, first, the Key Attributes require jurisdictions to have a designated resolution authority that has a broad range of power to intervene and resolve a financial institution that is no longer viable, including through transfers of business and creditor-financed recapitalization. Second, for internationally active firms, the Key Attributes set out a framework to remove impediments to cross-border cooperation and provide resolution authorities with incentives, statutory mandates and powers to share information across borders and achieve a coordinated solution that takes into account financial stability in all jurisdictions affected by a financial institution's failure. Third, the Key Attributes requires jurisdictions to make sure that recovery and resolution plans are put in place for all G-SIFIs under the control of top officials, and informed by rigorous annual resolvability assessments that assess the feasibility and credibility of resolution strategies for each G-SIFI. Finally, jurisdictions are required to maintain Crisis Management Groups for all G-SIFIs, bringing together home and key host authorities and underpinned by institution-specific cross-border cooperation agreement.

The G20 and the FSB called on countries to undertake the reforms necessary to implement this standard. Effective implementation of the Key Attributes will require substantial follow-up work by national authorities, standard setting bodies and individual firms. Legislative changes will be required in many jurisdictions to ensure that the national resolution confers all the necessary powers on national authorities. Financial institutions and authorities will also need to develop Recovery and Resolution Plans (RRPs), which include details on credible options for reversing financial deterioration or resolving failed firms.

In this context, G-SIBs are required to have a RRP, which will provide a strategic roadmap for authorities to unwind them, in place by end-2012.

Each G-SIB will have a Crisis Management Group (CMG) comprising the home regulatory authority and key host authorities. A board level representative of the banking firm must keep the RRP up-to-date and coordinate its annual review and resolvability assessment by the firm's CMG under its cross-border cooperation agreement. Institution-specific cross-border cooperation agreements must be put in place by authorities by end-2012.

#### **2-4. Improving the intensity and effectiveness of SIFI supervision**

Increasing the intensity and effectiveness of supervision is another key element of the G20's framework for SIFIs. In this context, many countries are seeking to intensify their supervisions of SIFIs by improving their supervisory tools and methods to enable supervisors to focus on key area of risk and to identify underlying weaknesses in firm's risk management practices. In addition, efforts to implement the new regulatory framework need to be supported by strong supervision of individual institutions.

To this end, the FSB called on supervisors to be held to higher standards. The BCBS reviewed and revised the "Basel Core Principles for Effective Banking Supervision".

The crisis also illustrated the shortcomings in cross-border supervisory relationship. The shortcomings are addressed through the strengthening of supervisory college functioning and the establishment of crisis management groups. Since supervisory colleges are an important tool, the BCBS and IAIS continue to study and improve their effectiveness.

#### **2-5. Extending the SIFI framework**

At the Cannes Summit, the G20 Leaders asked the FSB in consultation with the BCBS to extend the G-SIB framework to domestic systemically important banks (D-SIBs). Also, the IAIS was asked with the development of assessment methodology for the identification of global systemically

important insurers (G-SIIs) and to continue its work on a common framework for the supervision of internationally active insurance groups. In addition, the G20 Leaders requested the FSB in consultation with IOSCO to prepare methodologies to identify global systemically important non-bank financial entities by end-2012.

The FSB submitted to the G20 Finance Ministers and Central Bank Governors in April 2012 a progress report on the modalities to extend the G-SIB framework to D-SIBs. The report suggested that the policy framework for D-SIB would take the perspective of individual jurisdictions and that the D-SIB framework being considered would be based on assessments by local authorities, who were best-placed to identify D-SIBs in their own jurisdictions.

Nevertheless, the D-SIB framework should be compatible with G-SIB framework, with respect to ensuring that adequate and consistent incentive structures are in place at the domestic as well as the global level. The principles for D-SIBs being considered therefore seek to establish a minimum framework, address the cross-border externalities that the failure of a D-SIB may pose, and preserve a level playing field within and across jurisdictions. Also, the principles would include guidelines for national authorities to assess the systemic importance of banks in a domestic context.

Currently, the BCBS is developing a set of principles as a common framework for D-SIBs. The principles include on the issue of compatibility with the G-SIB framework, home-host country coordination, and the instruments and composition of additional loss absorbency for D-SIBs. The FSB and BCBS will report the outcome of this work to the G20 Finance Ministers and Central Bank Governors meeting in November 2012.

Regarding G-SIIs, the IAIS has made progress in developing an assessment methodology for identifying them. The IAIS issued a consultation paper on this. The paper also included some initial thoughts on potential policy measures that should apply to G-SIIs including enhanced supervision,

improved resolvability, structural measures higher loss absorbency and restrictions on certain activities. The IAIS will deliver to the G20 in April 2013 a consolidated paper on the assessment methodology and the policy measure. At that time, the FSB, in consultation with the IAIS, will determine the initial list of G-SIIs.

In response to the request of the G20 Leaders, the FSB, in consultation with the IOSCO, is preparing methodologies for identifying non-bank G-SIFIs. In developing the methodologies, the FSB will focus on detailed design issues such as the scope of application, applicability of materiality criteria, methods of operations and data availability.

## **2-6. Strengthening core financial market infrastructures**

The robustness of the infrastructure underpinning financial transactions is central to containing contagion in the event of SIFI failure. Consequently, the way market infrastructures are designed and how they function has important implications for financial stability because they can act as a channel through which disruptions can spread among financial market participants.

With regards to strengthening financial market infrastructures (FMIs), the CPSS and IOSCO finalized international standards for core financial market infrastructure and published their final report, "Principles for Financial Market Infrastructures", in April 2012. The report updates, harmonizes, and strengthens the risk management and related standards applicable to FMIs, including systemically important payment systems, central securities depositories, securities settlement systems, central counterparties, and trade repositories. The report replaces the CPSS and IOSCO's previous standards for systemically important payment systems, central securities depositories, securities settlement systems (SSSs), central counterparties (CCPs) and trade repositories.

The new standards are designed to make FMIs more resilient to financial crises and, in particular, participant defaults. The report also includes revised

responsibilities of relevant authorities in regulating, supervising and overseeing FMIs. CPSS and IOSCO members will strive to adopt the new standards by end-2012 and put them into effect as soon as possible. Also, CPSS and IOSCO have started work on resolution of FMIs and will work with the FSB to develop sector-specific guidance for the application of the FSB Key Attributes resolution framework to these FMIs.

### **3. Strengthening the oversight and regulation of shadow banking**

Another critical element of the reform agenda is to monitor and address the risks that may come from the shadow banking system. Shadow banking refers to “credit intermediation involving entities and activities outside the regular banking system”<sup>20</sup>. Shadow banking includes: the activities of money market funds; lending by unregulated finance companies; the issuance by specialized conduit and investment vehicles of commercial paper backed by long-term assets; and the funding of securitization activities through repo markets. However, the shadow banking system is closely intertwined with the regulated system. Large banks typically draw substantial income from shadow banking activities and retain both direct and indirect credit and operational exposures, backup liquidity lines, brokerage services, warehousing and credit insurance. Shadow banking can perform valuable functions, including facilitating credit extension to certain sectors and providing banks and investors with a range of vehicles for managing credit, liquidity and maturity risk.

However, the recent financial crisis illustrated that shadow banking can contribute to systemic risk, both directly and through its interconnectedness with the regular banking system. It can also create opportunities for regulatory arbitrage that might undermine stricter bank regulation and lead to a build-up of additional leverage and risks in the financial system.

In this regard, following the completion of the Basel III framework, the G20 Leaders called for work to address the potential that strengthened

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<sup>20</sup> Financial Stability Board, “Shadow Banking: Scoping the Issues”, A Background Note of the Financial Stability Board, April 2011

banking regulation would widen regulatory gaps vis-à-vis the shadow banking system at the Seoul Summit. They requested the FSB to develop a framework to strengthen the regulation and oversight of the shadow banking system. In response to this request, the FSB formed a task force to clarify the exact definition of the shadow banking and its role and risks; to set out approaches for effective monitoring of it; and to prepare additional regulatory measures to address the systemic risk and concerns about regulatory arbitrage that it poses.

In April 2011, the FSB published a background note<sup>21</sup> to address such risks posed by the shadow banking system. It defined the shadow banking system on the basis of a practical two-step approach by first casting the net wide to all non-bank credit intermediation for monitoring purpose and then narrowing the focus for policy purposes to a subset where systemic risk and concerns about regulatory arbitrage are relevant.

Subsequently, the FSB set out initial recommendations in its October 2011 report<sup>22</sup> to address such risks posed by the shadow banking system. At the Cannes Summit in November 2011, the G20 Leaders endorsed the FSB's initial recommendations with a work plan to further develop them in the course of 2012.

The FSB's initial recommendations adopted a two-pronged approach. First, the FSB will enhance the monitoring framework through continuing its annual monitoring exercise to assess global trends and risks, with more jurisdictions participating in the exercise. Second, the FSB will develop recommendations to strengthen the regulation of the shadow banking system to mitigate the potential systemic risk with specific focus on the following five areas. The five areas include: to mitigate the spill-over effect between the regular banking system and the shadow banking system; to reduce the susceptibility of money market funds to runs; to assess and mitigate systemic risks posed by other shadow banking entities; to assess and align the

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<sup>21</sup> Financial Stability Board, "Shadow Banking: Scoping the Issues", A Background Note of the Financial Stability Board, April 2011

<sup>22</sup> Financial Stability Board, "Shadow Banking: Strengthening Oversight and Regulation", 27 October 2011

incentives associated with securitization to prevent a repeat of the creation of excessive leverage in the financial system; and to dampen risks and pro-cyclical incentives associated with secured financing contracts such as repos and securities lending.

### **3-1. Strengthening oversight of the shadow banking system**

The FSB set out recommendation for effective monitoring of shadow banking in its October 2011 report. The recommendations consist of seven high-level principles and a stylized three-step monitoring process. The seven high-level principles specifies essential principles concerning scope, process, data and information, innovation and mutation, regulatory arbitrage, jurisdiction-specific features, and information exchange in developing an effective monitoring framework. At the same time, the FSB recommends authorities to put in place an appropriate monitoring system in line with the stylized three-steps which consist of: scanning and mapping of the overall shadow banking system (step 1); identification of the aspects of the shadow banking system posing systemic risk or regulatory arbitrage concerns (step 2); and detailed assessment systemic risk and/or regulatory arbitrage concerns (step 3).

In addition, the FSB has committed to conduct annual monitoring exercises to assess global trends and risks in the shadow banking system. The global monitoring exercise conducted in 2011 covered eleven FSB member jurisdictions and the euro area. The coverage of the 2012 monitoring exercise will be extended to cover the remaining FSB jurisdictions. The annual monitoring is expected to facilitate the national authorities' assessment of shadow banking risks based on the FSB recommendations, and the sharing of experiences among authorities in order to highlight trends in shadow banking that are relevance to the stability of the global financial system.

### **3-2. Strengthening regulation of the shadow banking system**

Based on the FSB's initial recommendations, five work streams have been established to develop policy recommendations in the following five areas. They are: banks' interactions with shadow banking entities; money market funds (MMFs); other shadow banking entities; securitization; and securities lending and repos.

First, the BCBS was tasked to develop policy recommendations to regulate banks' interaction with shadow banking entities. It reviews the consolidation rules for prudential purposes; limits on the size and nature of a bank's exposures to shadow banking entities; risk-based capital requirements of banks' exposures to shadow banking entities; and the treatment of reputational risk and implicit support.

Second, the IOSCO was responsible for developing policy recommendations to reduce the susceptibility of MMFs to runs. The possible policy options include: a mandatory move from constant to variable net asset value; enhancement of liquidity risk management; and reduction in the importance of ratings in the MMF industry.

Third, an FSB work stream is developing policy recommendations on the regulation of shadow banking entities other than MMF to mitigate their systemic risks. The work stream completed a categorization and data collection exercise for a wide range of non-bank financial institutions. The work stream is adopting a two-step prioritization process to narrow the scope to certain types of entities that may need policy responses. The first step is to develop a list of entity types for closer scrutiny based on national experience and size. The second step is to conduct the detailed assessment of the shadow banking risk factors such as maturity transformation, liquidity transformation and leverage with respect to each entity type in the list and develop policy recommendations.

Fourth, IOSCO was tasked to assess and align the incentives associated with securitization in an attempt to prevent excessive leverage created by securitization. Specifically, this work stream is examining the retention requirements and measures that are aimed at enhancing transparency and standardization related to securitization.

Finally, an FSB work stream is examining the regulation of secured financing contracts such as repos and securities lending in the context of financial stability. The financial stability issues identified by the work stream include: lack of transparency; pro-cyclicality of system leverage and interconnectedness through valuation, haircuts and collateral re-use; other issues associated with re-use of collaterals; potential risks arising from fire-sale of collateral assets; potential risks arising from securities lending activities; shadow banking through cash collateral reinvestment; and insufficient rigor in collateral management and valuation. Based on its identification of financial stability issues, the work stream will develop policy recommendations.

#### **4. OTC derivatives reforms**

Over-the-counter (OTC) derivatives benefit financial markets and the wider economy by improving the pricing of risk, adding to liquidity and helping market participants manage their risks. Markets in certain OTC derivatives continued to function well throughout the recent financial crisis. Nevertheless, the financial crisis revealed weaknesses in OTC markets that had contributed to the build-up of systemic risk. These weaknesses included the build-up of large counterparty exposures between particular market participants which did not manage risk appropriately; contagion risk arising from the interconnectedness of OTC derivatives market participants; and the limited transparency of overall counterparty credit risk exposures that precipitated a loss of confidence and market liquidity in time of stress.

To address these weaknesses, at the Pittsburg Summit in September 2009, the G20 Leaders called for reforms in OTC derivatives markets. Specifically, the Leaders agreed that all standardized OTC derivative contracts should be

traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties (CCPs) by end-2012 at the latest; OTC derivative contracts should be reported to trade repositories (TRs); and non-centrally cleared contracts should be subject to higher capital requirements<sup>23</sup>.

The basic ideas behind the Leaders' commitments make great sense to address the weaknesses in OTC market. First, standardization is a key condition for central clearing and trading on exchange or electronic trading platforms, and also helps to facilitate greater market transparency. Second, the shift of OTC derivatives to central clearing would make significant progress toward mitigating systemic risk by improving counterparty credit risk management, allowing multilateral netting, reducing uncertainty about participants' exposures, and increasing transparency of market activity. CCPs, in particular, mutualize the risk of counterparty failure through use of pre-funded default and guaranty funds and manage counterparty credit risk centrally. Third, TRs can conduct an important function as credible source of data on OTC derivatives transactions for authorities, market participants and the public, by centralizing the collection, storage and dissemination of information in a consistent manner.

In response, the FSB published a report, "Implementing OTC Derivatives Markets Reforms", in October 2010 that set out twenty one recommendations to address practical issues in implementing the G20 Leaders' commitments. Subsequently, the FSB published its progress report on the implementation of OTC derivatives reform in October 2011. The report urged that all jurisdictions and markets need to push aggressively push ahead to achieve full implementation of market changes by end-2012 to meet the G20 Leaders' commitments.

Since the October 2011 progress report, standard-setting bodies (SSBs) have made significant progress in developing specific principles and

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<sup>23</sup> Leaders' Statement: The Pittsburgh Summit, September 24-25

recommendations for the implementation of the OTC market reform. CPSS and IOSCO issued a report, “Principles for Financial Market Infrastructures”, in April 2012. These principles are important milestone in the global development of a sound basis for central clearing of all standardized OTC derivatives. IOSCO published its “Report on Requirements for Mandatory Clearing” in February 2012, providing important guidance for jurisdictions on the process for setting the scope of central clearing requirements. In January 2012, CPSS and IOSCO issued a “Report on OTC Derivatives Data Reporting and Aggregation Requirements”, recommending that trade repositories implement measure to provide authorities with effective and practical access. IOSCO published its “Final Report on International Standards for Derivatives Market Intermediary Regulation” in June 2012. This report recommended high-level international standards for the regulation of market participants that are in the business of dealing, making a market or intermediating transactions in OTC derivatives.

In addition, the FSB identified four safeguards for a resilient and efficient environment for central clearing in January 2012. The safeguards include: fair and open access by market participants to CCPs, based on transparent and objective criteria; cooperative oversight arrangements between all relevant authorities; resolution and recovery regimes that ensure the core functions of CCPs are maintained during times of crisis and that consider the interests of all jurisdictions where the CCP is systemically important; and appropriate liquidity arrangement for CCPs in the currencies in which they clear.

## **5. Strengthening and converging accounting standards**

During the recent financial crisis, the fair value accounting model for financial assets and the current system of loan-loss provisioning based on incurred losses increased pro-cyclicality, to a certain extent. At the same time, the complicated accounting standards of different countries reduced financial market transparency.

At the Cannes Summit in November 2011, the G20 Leaders reaffirmed their objective to achieve a single set of high quality global accounting standards and meet the objectives set at the London Summit in April 2009. The Leaders called on the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) to complete their convergence project and requested a progress report on this issue at the G20 Finance Ministers and Central Bank Governors meeting in April 2012.

In response to the Leaders' request, a joint update report from the IASB and FASB was submitted to the G20 Finance Ministers and Central Bank Governors in April 2012. According to the report, important improvements to their standards on financial institutions' fair value and off-balance sheet entities were finalized in 2011. However, the report indicated that the convergence process was taking longer than initially expected in some areas, including classification, measurement and provisioning. The IASB and FASB reported that they were making progress on projects to converge their standards on financial instruments, including a joint expected impairment provisioning approach and a more converged approach to classification and measurement. The IASB and FASB plan to conduct further public consultation in the second half of 2012 and are expected to issue final converged standards in number of key areas by mid-2013. The two Boards have extended certain project target completion dates in order to allow sufficient time for extensive outreach and public comment on the large number of planned major Exposure Drafts, and for the Boards to reflect that feedback in high-quality final standards.

## **6. Reducing reliance on credit rating agencies' ratings**

The recent financial crisis clearly illustrated that the inadequate risk assessments by credit rating agencies (CRAs), and investors' mechanical reliance on their credit rating amplified pro-cyclicality. At the same time, investors' over-reliance on CRA ratings contributed to systemic disruption through herding behavior and sell-offs of securities when they are abruptly downgraded, so-called "cliff effects".

To address the inadequate risk assessment by CRAs, national and regional initiatives are ongoing to strengthen oversight of credit rating agencies (CRAs), based upon the IOSCO CRA Code of Conduct Fundamentals. In particular, the IOSCO Task force on CRA published the results of its work reviewing CRA implementation the IOSCO CRA Code in March 2009. The report found that a larger proportion of the CRAs reviewed were aware of the IOSCO CRA code and took steps to incorporate its provisions into their codes of conduct. Also, the IOSCO announced that the Task Force would be converted into a permanent standing committee of IOSCO's Technical Committee to review and update the international consensus regarding CRA oversight.

In October 2010, the FSB published a set of principles for reducing mechanical reliance on CRA ratings<sup>24</sup> and requested SSBs and regulators to consider next steps to translate the principles into more specific policy actions. In essence, the FSB Principles aim to encourage banks, institutional investors and other market participants to develop their own internal risk management capabilities to avoid mechanical reliance on external credit ratings. The Principles emphasized that CRA ratings should be no more than an input to the risk assessment process.

In this context, the FSB conducted a review of its members' compliance with the FSB Principles. The review found that a few jurisdictions passed, or proposed, wide-ranging legislative or regulatory measures to reduce reliance on CRA ratings, but were facing difficulties in detailed implementation. Consequently, the report called for clear milestones to be set out for the transition to a reduced reliance on CRA ratings over the medium term. Specifically, the report recommended the steps including: further actions by regulators to encourage the appropriate use of CRA rating as an input to the risk assessment process; and setting standards that actively promote the use of market participants' own risk capabilities. In addition, the report underlined that SSBs should promote the sharing of successful practices to strengthen credit risk capabilities and official sector bodies should publicly

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<sup>24</sup> Financial Stability Board, "Principles for Reducing Reliance on CRA Ratings", 27 October 2010

explain their approach to credit risk assessment in their market and investment operations.

To encourage further progress on these issues, the FSB will organize a workshop in September 2012 that will bring together SSBs and national experts to review the progress and agree on the next steps. The output from the workshop will be incorporated in a further progress report for the G20 Finance Ministers and Central Bank Governors meeting in November 2012.

## **7. Enhancing compensation practices**

Compensation practices at large financial institutions were a key contributing factor to the recent financial crisis. Asymmetries in remuneration systems in terms of risk and reward led to short-termism and excessive risk-taking. High short-term profits led to generous bonus payments to employees without adequate regard to the longer-term risks they imposed on their firms. These perverse incentives amplified the excessive risk-taking that severely threatened the global financial system. The lack of attention to risk also contributed to the large, in some cases extreme absolute level of compensation industry, leaving firms with less capacity to absorb losses as risks materialized. To safeguard financial stability, remuneration system in the financial sector must be better aligned to long-term value creation as well as prudent risk-taking.

Against this backdrop, the Financial Stability Forum, the predecessor of the FSB, issued “Principles for Sound Compensation Practices and their Implementation Standards in April 2009. The FSB Principles and Standards Sound Compensation Practices were endorsed by the G20 leaders at their Summits in London in April 2009 and Pittsburgh in September 2009. The principles include: (1) avoiding multi-year guaranteed bonuses; (2) requiring a significant portion of variable compensation to be deferred, tied to performance and subject to appropriate claw-back and to be vested in the form of stock or stock-like instruments, as long as these create incentives aligned with long-term value creation and the time horizon of risk; (3) ensuring that compensation for senior executives and other employees

having a material impact on the firm's risk exposure align with performance and risk; (4) making firms' compensation policies and structures transparent through disclosure requirements; (5) limiting variable compensation as a percentage of total net revenues when it is inconsistent with the maintenance of a sound capital base; and (6) ensuring that compensation committees overseeing compensation policies are able to act independently.

In March 2010, the FSB released the findings and conclusions of the peer review of implementation of the FSB Principles and Standards. In its "Thematic Review on Compensation: Peer Review Report" the FSB noted that the Principles and Standards are well reflected in the regulatory and supervisory frameworks of member jurisdictions<sup>25</sup>. It also added some recommendations,<sup>26</sup> however, and urged member countries to work toward complete adherence.

The 2011 FSB peer review on compensation, which was released in October 2011, indicated that good progress had been made in implementing the FSB Principles and Standards on Sound Compensation Practice. However, the report urged that more work was necessary to overcome constraints to full implementation by individual national authorities and to address concerns by firms of an unequal playing field.

In April 2012, in response to G20 Leaders' request, the FSB established Compensation Monitoring Contact Group (CMCG) comprising national experts from member jurisdictions with regulatory or supervisory responsibility on compensation practices. The CMCG is responsible for monitoring and reporting to the FSB on national implementation of the FSB Principles and Standards on Sound Compensation Practice.

The progress report sent to G20 Leaders in June 2012<sup>27</sup> was the first outcome of this monitoring exercise. The report noted that almost all FSB

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<sup>25</sup> 16 out of 24 countries have reflected the FSB Principles and Standards in their regulatory and/or supervisory approaches, and four countries are planning to reflect them shortly.

<sup>26</sup> Thematic Review on Compensation: List of Recommendations

<sup>27</sup> Financial Stability Board, "Implementing the FSB Principles for Sound Compensation Practices and their

member jurisdictions have now completed the implementation of the FSB Principles and Standards in their national regulation or supervisory guidance. By indicating that there remain important differences in terms of applying the FSB Principles and Standards, the report confirmed the 2011 peer review's conclusion that achieving lasting change in behavior and culture within firms is a long-term challenge requiring a sustained commitment and that additional time is needed for a common supervisory understanding to evolve and for effective and consistent implementation of the FSB Principles and Standards to take place.

## **8. Other issues**

### **8-1. Building a common legal entity identifier**

At the Cannes Summit, the G20 Leaders supported the creation of global legal entity identifier (LEI) which uniquely identifies parties to financial transactions. The Leaders asked the FSB to take the lead in helping coordinate work among the regulatory community to prepare recommendations for a governance framework for global LEI that is consistent with the public interest.

The global LEI system would contribute to and facilitate many financial stability objectives. They include: improving risk management and mitigating operational risks in individual firms; better assessment of micro and macro-prudential risks; facilitation of orderly resolution; containing market abuse and curbing financial fraud; and enabling higher quality and accuracy of financial data overall.

The FSB prepared a report containing recommendations to implement a global LEI system<sup>28</sup> in June 2102. The report contains 35 recommendations for development and implementation of the global LEI system. These recommendations are guided by a set of “Global LEI System High Level Principles” which set out the objectives that the design of a global LEI

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Implementation Standards”, Progress Report, 13 June 2012

<sup>28</sup> Financial Stability Board, “A Global Legal Entity Identifier for Financial Market”, 8 June 2012

system must meet. The broad goal of the proposals is to put in place a strong global governance framework to protect the public interest, while promoting an open, flexible, and adaptable operational model for the global LEI system. The FSB's objective is to have a fully functioning self-standing governance and operational framework for the global LEI system by March 2013.

## **8-2. Enhancing market disclosure and functioning**

The financial markets are a potential transmission mechanism for systemic crisis. This is particularly the case when market participants are faced with significant uncertainty, and engage in panic behavior.

In this regard, the IOSCO has taken steps to strengthen market disclosure and enhance investor protection. The IOSCO published in February 2012 a consultation report on asset-backed securities<sup>29</sup> (ABSs) that provides guidance for securities regulators who are developing or reviewing their regulatory regimes for ongoing disclosure for ABSs so as to enhance investor protection. Also, the IOSCO published in February 2012 a consultation report on common principles concerning stability and disclosure standards for market intermediaries in relation to the distribution of complex financial products<sup>30</sup>. In addition, the IOSCO issued in March 2012 a consultation paper on exchange traded funds<sup>31</sup> (ETFs) which included some common principles and guidelines relating to ETFs on investor protection, sound functioning of markets and financial stability.

## **8-3. Building and implementing macro-prudential policy frameworks and tools**

Recently, policymakers have paid greater attention to build and implement macro-prudential policy frameworks. It is widely recognized after the recent

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<sup>29</sup> International Organization of Securities Commissions, "Principles for Ongoing Disclosure for Asset-Backed Securities", Consultation Paper, February 2012

<sup>30</sup> International Organization of Securities Commissions, "Suitability Requirements with respect to the Distribution of Complex Financial Products", Consultation Paper, February 2012

<sup>31</sup> International Organization of Securities Commissions, "Principles for the regulation of Exchange Traded Funds", Consultation Paper, March 2012

financial crisis that focusing merely on the soundness of individual financial institutions is a necessary condition, but not a sufficient condition for financial stability.

The G20 Leaders stated at the Cannes Summit that they would develop macro-prudential policy frameworks and to limit the build-up of risks in the financial sector, building on the ongoing work of the FSB-BIS-IMF on this subject. While a small number of jurisdictions including UK, US and EU have established new institutional structures with macro-prudential mandates, many others are implementing enhancements within existing institutional arrangements.

The BCBS published in May 2012 two working papers arising from its Research Task Force Transmission Channel project that help to build the knowledge base in the area of macro-prudential policies. The first working paper<sup>32</sup> analyzes the link between the real economy and the financial sector, and channels through which the financial system may transmit instability to the real economy. The second working paper<sup>33</sup> focuses the methodological progress and modeling advancements aimed at improving financial stability monitoring and the identification of systemic risk potential.

#### **8-4. Non-cooperative jurisdictions**

Hedge fund transactions through tax havens and off-shore financial centers were also seen as a problem leading to the financial crisis. Insufficient prudential regulations and information led to limited detection and management of the risks imposed by hedge funds that set up paper companies in off-shore financial centers.

To protect the global financial system and prevent tax leakages, the G20 initiated discussions on Non-Cooperative Jurisdictions (NCJs) in the areas of

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<sup>32</sup> Basel Committee on Banking Supervision, “The policy implications of transmission channels between the financial system and the real economy”, BCBS Working Papers No 20, May 2012

<sup>33</sup> Basel Committee on Banking Supervision, “Models and tools for macro-prudential analysis”, BCBS Working Papers No 21, May 2012

exchange of information on taxation and Anti-Money Laundering/Combating the Financing of Terrorism (AML/CFT).

At the G20 London Summit, leaders requested that the relevant institutions conduct peer review processes and assessments to ensure full compliance with global standards on taxation, anti-money laundering, and combating the financing of terrorism.

The OECD Global Forum will be conducting a three-year survey on jurisdictions to see whether they have implemented the internationally agreed tax standards, and will report its findings to the G20 meetings. The G20 initiated peer reviews of tax havens from March 2010, and will deliver its first report on this by the end of this year.

The Financial Action Task Force (FATF), through its public statement on Feb. 18, 2010, released the list of countries that pose serious risks to the global community due to their defective systems for AML/CFT.

### **III. Conclusion and Remaining Challenges**

It is fair to say that progress made on the ongoing G20 agenda for more resilient global financial system has been very comprehensive and impressive. Nevertheless, there remains more works to do in achieving the objectives of this agenda. In particular, we need to focus more on completing the regulatory frameworks as early as possible, implementing them in a globally consistent way, and ensuring adequate oversight.

As far as the completion of the regulatory framework is concerned, more efforts need to be focused on completing regulatory reform in some areas which show lack of progress. A notable example in this context might be the reform agenda concerning the strengthening and converging accounting standards. Other areas include developing effective regulations on non-bank SIFIs and shadow banking. If the reform process in these areas were to be further delayed, the associated regulatory uncertainty could jeopardize a recovery from the crisis and the potential for new risk to be emerged from these areas is very likely to be increased.

Regarding the implementation of the ongoing regulatory reform agenda, we need to keep in mind what history guides us. The ongoing regulatory reform process reminds us of a “regulatory dialectics”. After experiencing a period of financial sector regulation until the early 1980s, we subsequently witnessed a period of deregulation. Since the financial crisis, however, we are now entering a period of re-regulation. The question is whether this is the end of the process. The answer to this depends critically on the sustainability of the current regulatory reform, in this environment of globally integrated financial markets. In this regard, it is important to emphasize that regulatory arbitrage has played a key role to transform the process from regulation to deregulation. In fact, if regulatory arbitrage undermined the effectiveness of regulations, this could bring in de facto deregulation.

One task in this context is ensuring that regulatory arbitrage, in particular cross-border regulatory arbitrage, does not jeopardize the effectiveness of

tighter regulation. This calls for more coordination of and cooperation in regulatory reform at the international level. It should be emphasized in this regard that, in order to ensure a level playing field, broad principles of financial regulatory reform need to be discussed within a multilateral process led by the G20, rather than through separate unilateral processes. In this context, the G20 has established an effective framework to prevent cross-border regulatory arbitrage through peer review and thematic review on the implementation of each reform agenda.

At the same time, cross-sectional arbitrage could equally undermine the effectiveness of the ongoing regulatory reform. In this context, the G20 Leaders' request at the Seoul Summit for the FSB to address the potential that strengthened banking regulation would widen regulatory gaps vis-à-vis the shadow banking system makes great sense. Although the FSB is currently working very hard to finalize an effective regulatory framework for shadow banking system, building an effective system of regulating and overseeing the shadow banking system is a very complex issue. It is complex because the shadow banking system is by definition a rapidly evolving area in the financial system. Therefore, it is very important to proactively monitor financial innovations that establish new channels that may tend to grow in tandem. In addition, it is an urgent task to identify non-bank SIFIs and develop an effective regulatory framework for them in order to prevent cross-sectional regulatory associated with Basel III preemptively.

Another task is to make sure that the pendulum does not swing back too far. In particular, as the euro-zone crisis intensifies, some critics have begun to question the sustainability of the current regulatory reform. They have argued that many of the reform measures rely too heavily on financial sector taxation in the forms of capital regulation and capital surcharges on SIFIs. Going forward, they say, these measures could lead to a substantial increase in the cost of capital, even though the new norm for the global economy post-crisis does not appear likely to be very bright compared to the pre-crisis period. While this argument appears to be somewhat legitimate, there is also a strong case for maintaining the momentum of regulatory reform in order to

prevent future crises. In particular, if the ongoing regulatory would be reversed or derailed, this could introduce another uncertainty, regulatory uncertainty, which could be an additional uncertainty in this extremely uncertain macroeconomic and financial environment.

To sustain the reform process, it is very important to strike a balance between the risk of over-regulation and that of under-regulation. Here are some suggestions for a more balanced approach. First, in order to reduce the burdens on the private sector caused by tightened regulation, greater emphasis should be placed on the reform of public policy to prevent future crises. In particular, one urgent task is building a robust macro-prudential policy framework that can prevent financial imbalances from acting as a root cause of future crises.

Second, more efforts should be made to identify and correct institutional distortions which encourage financial leverage by all economic actors. In this case, one obvious distortion is preferential tax treatment for debt financing. In particular, given the weak fiscal balances of major advanced economies, there appears to be a very compelling case for elimination of such preferential tax treatment at this time.

Another crucial area to be addressed is fundamental weaknesses in the corporate governance of financial firms. As argued by Roubini and Mihm,<sup>34</sup> many financial firms are exposed to the so-called “double agency conflict”. In many financial firms, the shareholders are themselves in a principal-agency problem. The shareholders own shares via large institutional investors, such as pension funds. The managers of these funds are their agents, not their principals. In this situation, it is very difficult for shareholders of financial firms to monitor what executives and traders of the firms are doing. The situation could go even worse, if the managers of these funds tend to pursue short-term profits. Although the G20 has implemented measures to enhance compensation practices, these measures appear to be a cure for symptoms rather than that for root causes of the

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<sup>34</sup> Roubini, Nouriel and Stephen Mihm, *Crisis Economics*, Penguin Books, 2011

problem. While recognizing that there is no one-size-fits-all solution for the problem, more efforts should be focused on improving the corporate governance structure of financial firms.

## References

Basel Committee on Banking Supervision (2010), “Basel III: A global regulatory framework for more resilient banks and banking systems”, Bank for International Settlement, Basel, Switzerland, May 2010

Bank for International Settlement (2011), **BIS 81<sup>st</sup> Annual Report**, Bank for International Settlement, Basel, Switzerland, June 2011

Calello, Paul and Wilson Erwin (2010), “From Bail-out to Bali-in”, The Economist, on 28 January 2010

Caruana, Jaime (2011), “Regulatory reform: remaining challenges”, A speech by Jaime Caruana, General Manager of Bank for International Settlement, in Luxembourg on 7 July 2011

Hannoun, Herve (2010), “Towards a Global Financial Stability Framework”, A speech by Herve Hannoun, Deputy General Manager of Bank for International Settlement, at the 45<sup>th</sup> SEACEN Governors’ Conference on 26-27 February 2010

Financial Stability Board (2012), “Overview of Progress in the Implementation of the G20 Recommendations for Strengthening Financial Stability”, Report of the Financial Stability Board to G20 Leaders, 12 November 2012

Financial Stability Board (2012), “Implementing the FSB Principles for Sound Compensation Practices and their Implementation Standards”, Progress Report, 13 June 2012

Financial Stability Board (2012), “A Global Legal Entity Identifier for Financial Market”, 8 June 2012

Financial Stability Board (2011), “Overview of Progress in the Implementation of the G20 Recommendations for Strengthening Financial Stability”, Report of the Financial Stability Board to G20 Leaders, 4 November 2011

Financial Stability Board (2011), “Shadow Banking: Strengthening Oversight and Regulation”, 27 October 2011

Financial Stability Board (2011), “Key Attributes of Effective Resolution Regimes for Financial Institutions”, October 2011

Financial Stability Board (2011), “Shadow Banking: Scoping the Issues”, A Background Note of the Financial Stability Board, April 2011

Financial Stability Board (2010), “Principles for Reducing Reliance on CRA Ratings”, 27 October 2010

Financial Stability Board (2010), “Reducing the moral hazard posed by systemically important financial institutions”, October 2010

International Organization of Securities Commissions (2012), “Principles for the regulation of Exchange Traded Funds”, Consultation Paper, March 2012

International Organization of Securities Commissions (2012), “Principles for Ongoing Disclosure for Asset-Backed Securities”, Consultation Paper, February 2012

International Organization of Securities Commissions (2012), “Suitability Requirements with respect to the Distribution of Complex Financial Products”, Consultation Paper, February 2012

Morgan, Donald P. and Kevin J. Stiroh (2005), "Too Big to Fail after All These Years," Staff Report, Federal Reserve Bank of New York, September 2005

Park, Yung Chul and Sungmin Kim (2011), “G20 Financial Regulatory Reform: Current Status and Future Challenges”, **Global Leadership in Transition**, Brookings Institution Press, June 2011

PWC (2011), “The trillion dollar question: can bail-in capital bail out the banking industry?”, **Basel III and beyond**, November 2011

Roubini, Nouriel and Stephen Mihm, **Crisis Economics**, Penguin Books, 2011

Tarullo, Daniel K. (2012), “Regulatory reform since the financial crisis”, Speech at the Council on Foreign Relations C. Peter McColough Series on International Economics, New York, 2 May 2012

Vinals, Jose, Jonathan Fiechter, Celya Pazarbasioglu, Laura Kodres, Aditya Narain, and Marina Moretti (2010), “Shaping the New Financial System”, IMF Staff Position Note,(SPN/1015), International Monetary Fund, Washington, DC, October 3, 2010

Zhou, Jiangping ,Virginia Rutledge, Woulter Bassu, Marc Dobler, Nadege Jassaud, and Michael Moore (2012), “From Bail-out to Bail-in: Mandatory Debt Restructuring of Systemic Financial Institutions”, IMF Staff Discussion Note (SDN/12/03), International Monetary Fund, Washington, DC, April 24, 2012